

National Institute
of Standards and Technology



National Voluntary
Laboratory Accreditation Program

ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation



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CALIBRATION LABORATORIES

NVLAP LAB CODE 200495-0

NORTH CAROLINA STANDARDS LABORATORY

4040 District Drive
Raleigh, NC 27607-6470
Mr. L. F. Eason
Phone: 919-733-4411 fax: 919-733-8804
E-Mail: lf.eason@ncmail.net
URL: <http://www.agr.state.nc.us/standard/>

NVLAP Code: 20/A01

ANSI/NCSL Z540-1-1994; Part 1

Compliant

DIMENSIONAL

NVLAP Code: 20/D05
Length and Rigid Rules

Range in inches	Best Uncertainty in inches (\pm) ^{note 1}	Remarks
1	0.0014	Rigid Rules
2	0.0019	Rigid Rules
3	0.0025	Rigid Rules
4	0.0025	Rigid Rules
5	0.0016	Rigid Rules
6	0.0021	Rigid Rules
7	0.0013	Rigid Rules
8	0.0024	Rigid Rules
9	0.0026	Rigid Rules

March 31, 2005

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10	0.0022	Rigid Rules
11	0.0015	Rigid Rules
12	0.0018	Rigid Rules
24	0.0023	Rigid Rules
36	0.0036	Rigid Rules
48	0.0047	Rigid Rules
60	0.0043	Rigid Rules

NVLAP Code: 20/D13

Surveying Tapes

<i>Range in feet</i>	<i>Best Uncertainty in inches^{note 1}</i>	<i>Remarks</i>
1	0.0041	Bench Method
2	0.0041	Bench Method
3	0.0041	Bench Method
4	0.0041	Bench Method
5	0.0041	Bench Method
6	0.0041	Bench Method
7	0.0041	Bench Method

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8	0.0041	Bench Method
9	0.0041	Bench Method
10	0.0041	Bench Method
20	0.0053	Bench Method
30	0.0053	Bench Method
40	0.0063	Bench Method
50	0.0072	Bench Method
60	0.0072	Bench Method
70	0.0079	Bench Method
80	0.0079	Bench Method
90	0.0086	Bench Method
100	0.0093	Bench Method

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Surveying Tapes

<i>Range in meters</i>	<i>Best Uncertainty in meters^{note 1}</i>	<i>Remarks</i>
0.1	0.13	Bench Method
0.2	0.13	Bench Method
0.3	0.13	Bench Method
0.4	0.13	Bench Method
0.5	0.13	Bench Method
0.6	0.13	Bench Method
0.7	0.13	Bench Method
0.8	0.13	Bench Method
0.9	0.13	Bench Method
1	0.13	Bench Method
2	0.13	Bench Method
3	0.13	Bench Method
4	0.13	Bench Method
5	0.13	Bench Method

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NORTH CAROLINA STANDARDS LABORATORY

MECHANICAL

NVLAP Code: 20/M08

Mass

Range	Best Uncertainty (\pm) in mg ^{note 1}	Remarks
30 kg	36	Echelon I
20 kg	25	Echelon I
10 kg	15	Echelon I
5 kg	4.5	Echelon I
3 kg	2.8	Echelon I
2 kg	2.1	Echelon I
1 kg	0.066	Echelon I
500 g	0.038	Echelon I
300 g	0.027	Echelon I
200 g	0.023	Echelon I
100 g	0.023	Echelon I
50 g	0.012	Echelon I
30 g	0.0073	Echelon I
20 g	0.0052	Echelon I

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10 g	0.0036	Echelon I
5 g	0.0019	Echelon I
3 g	0.0012	Echelon I
2 g	0.00087	Echelon I
1 g	0.00071	Echelon I
500 mg	0.00049	Echelon I
300 mg	0.0004	Echelon I
200 mg	0.00037	Echelon I
100 mg	0.00042	Echelon I
50 mg	0.00064	Echelon I
30 mg	0.00059	Echelon I
20 mg	0.0006	Echelon I
10 mg	0.00072	Echelon I
5 mg	0.0005	Echelon I
3 mg	0.00052	Echelon I
2 mg	0.00045	Echelon I
1 mg	0.00058	Echelon I

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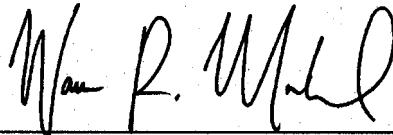
NVLAP LAB CODE 200495-0

NORTH CAROLINA STANDARDS LABORATORY

50 lb	44	Echelon I
30 lb	27	Echelon I
20 lb	19	Echelon I
10 lb	12	Echelon I
5 lb	2.8	Echelon I
3 lb	1.9	Echelon I
2 lb	0.079	Echelon I
1 lb	0.044	Echelon I
0.5 lb	0.025	Echelon I
0.3 lb	0.019	Echelon I
0.2 lb	0.015	Echelon I
0.1 lb	0.016	Echelon I
0.05 lb	0.0084	Echelon I
0.03 lb	0.0056	Echelon I
0.02 lb	0.0043	Echelon I
0.01 lb	0.004	Echelon I
0.005 lb	0.0021	Echelon I

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0.003 lb	0.0013	Echelon I
0.002 lb	0.00097	Echelon I
0.001 lb	0.00082	Echelon I
8 oz	0.025	Echelon I
4 oz	0.049	Echelon I
2 oz	0.044	Echelon I
1 oz	0.022	Echelon I
1/2 oz	0.011	Echelon I
1/4 oz	0.023	Echelon I
1/8 oz	0.021	Echelon I
1/16 oz	0.011	Echelon I
1/32 oz	0.0052	Echelon I
1/64 oz	0.0052	Echelon I

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NORTH CAROLINA STANDARDS LABORATORY

NVLAP Code: 20/M08

Mass

Range	Best Uncertainty (\pm) in mg ^{note 1}	Remarks
250 kg	4845	Echelon II
200 kg	3585	Echelon II
100 kg	1638	Echelon II
50 kg	63	Echelon II
30 kg	39	Echelon II
25 kg	28	Echelon II
20 kg	27	Echelon II
10 kg	16	Echelon II
5 kg	5.1	Echelon II
3 kg	3.3	Echelon II
2 kg	2.3	Echelon II
1 kg	0.15	Echelon II
500 g	0.088	Echelon II
300 g	0.074	Echelon II
200 g	0.066	Echelon II

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100 g	0.025	Echelon II
50 g	0.014	Echelon II
30 g	0.0094	Echelon II
20 g	0.0076	Echelon II
10 g	0.0050	Echelon II
5 g	0.0024	Echelon II
3 g	0.0017	Echelon II
2 g	0.0014	Echelon II
1 g	0.0012	Echelon II
500 mg	0.0011	Echelon II
300 mg	0.00063	Echelon II
200 mg	0.00056	Echelon II
100 mg	0.00068	Echelon II
50 mg	0.00057	Echelon II
30 mg	0.00059	Echelon II
20 mg	0.00053	Echelon II
10 mg	0.00066	Echelon II

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5 mg	0.00055	Echelon II
3 mg	0.00056	Echelon II
2 mg	0.00050	Echelon II
1 mg	0.00062	Echelon II
2500 lb	19007	Echelon II
2000 lb	17369	Echelon II
1000 lb	718	Echelon II
500 lb	543	Echelon II
100 lb	71	Echelon II
50 lb	48	Echelon II
30 lb	28	Echelon II
25 lb	20	Echelon II
20 lb	20	Echelon II
10 lb	12	Echelon II
5 lb	3.2	Echelon II
4 lb	2.1	Echelon II
3 lb	2.1	Echelon II

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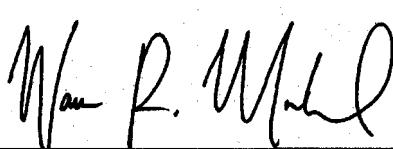
NVLAP LAB CODE 200495-0

NORTH CAROLINA STANDARDS LABORATORY

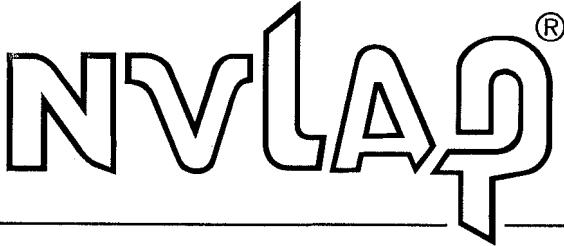
2 lb	0.41	Echelon II
1 lb	0.21	Echelon II
0.5	0.12	Echelon II
0.3	0.083	Echelon II
0.2	0.043	Echelon II
0.1	0.026	Echelon II
0.05 lb	0.14	Echelon II
0.03 lb	0.0096	Echelon II
0.02 lb	0.0063	Echelon II
0.01 lb	0.0045	Echelon II
0.005 lb	0.0025	Echelon II
0.003 lb	0.0017	Echelon II
0.002 lb	0.0014	Echelon II
0.001 lb	0.0012	Echelon II
8 oz	0.12	Echelon II
4 oz	0.26	Echelon II
2 oz	0.14	Echelon II

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1 oz	0.067	Echelon II
1/2 oz	0.034	Echelon II
1/4 oz	0.028	Echelon II
1/8 oz	0.023	Echelon II
1/16 oz	0.012	Echelon II
1/32 oz	0.0057	Echelon II

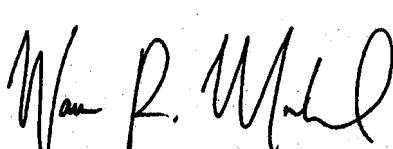
NVLAP Code: 20/M08

Mass

Range	Best Uncertainty (\pm) in mg ^{note 1}	Remarks
500 kg	5546	Echelon III
250 kg	3955	Echelon III
200 kg	2834	Echelon III
100 kg	1351	Echelon III
50 kg	62	Echelon III
30 kg	56	Echelon III
25 kg	53	Echelon III

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20 kg	48	Echelon III
10 kg	43	Echelon III
5 kg	5.5	Echelon III
3 kg	5.0	Echelon III
2 kg	3.1	Echelon III
1 kg	1.9	Echelon III
500 g	1.9	Echelon III
300 g	1.9	Echelon III
200 g	0.11	Echelon III
100 g	0.082	Echelon III
50 g	0.080	Echelon III
30 g	0.079	Echelon III
20 g	0.079	Echelon III
10 g	0.079	Echelon III
5 g	0.0041	Echelon III
3 g	0.0042	Echelon III
2 g	0.0040	Echelon III

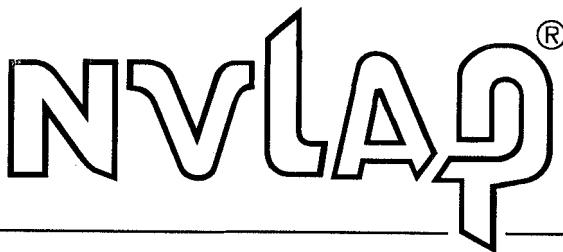
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1 g	0.0041	Echelon III
500 mg	0.0040	Echelon III
300 mg	0.0040	Echelon III
200 mg	0.0039	Echelon III
100 mg	0.0039	Echelon III
50 mg	0.0041	Echelon III
30 mg	0.0040	Echelon III
20 mg	0.0039	Echelon III
10 mg	0.0039	Echelon III
5 mg	0.0039	Echelon III
3 mg	0.0040	Echelon III
2 mg	0.0039	Echelon III
1 mg	0.0039	Echelon III
6000 lb	29066	Echelon III
5500 lb	29062	Echelon III
5000 lb	29057	Echelon III
4000 lb	22028	Echelon III

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3000 lb	22016	Echelon III
2500 lb	22010	Echelon III
2000 lb	11206	Echelon III
1000 lb	1022	Echelon III
500 lb	903	Echelon III
100 lb	164	Echelon III
50 lb	63	Echelon III
30 lb	45	Echelon III
25 lb	45	Echelon III
20 lb	45	Echelon III
10 lb	12	Echelon III
5 lb	3.8	Echelon III
4 lb	2.9	Echelon III
3 lb	2.9	Echleon III
2 lb	2.0	Echelon III
1 lb	1.9	Echelon III
0.5 lb	1.9	Echelon III

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0.3 lb	0.12	Echelon III
0.2 lb	0.089	Echelon III
0.1 lb	0.080	Echelon III
0.05 lb	0.080	Echelon III
0.03 lb	0.079	Echelon III
0.02 lb	0.079	Echelon III
0.01 lb	0.079	Echelon III
0.005 lb	0.079	Echelon III
0.003 lb	0.0042	Echelon III
0.002 lb	0.0041	Echelon III
0.001 lb	0.0039	Echelon III
8 oz	1.9	Echelon III
4 oz	0.093	Echelon III
2 oz	0.090	Echelon III
1 oz	0.082	Echelon III
1/2 oz	0.079	Echelon III
1/4 oz	0.082	Echelon III

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1/8 oz	0.022	Echelon III
1/16 oz	0.011	Echelon III
1/32 oz	0.0065	Echelon III

NVLAP Code: 20/M12

Volume

Range	Best Uncertainty (\pm) ^{note 1}	Remarks
1500 gallons	87 in ³	Transfer Method
1000 gallons	58 in ³	Transfer Method
500 gallons	29 in ³	Transfer Method
100 gallons	5.5 in ³	Transfer Method
50 gallons	4.9 in ³	Transfer Method
25 gallons	1.6 in ³	Transfer Method
5 gallons	0.30 in ³	Transfer Method
1 gallon	0.077 in ³	Transfer Method
20 liters	0.31 in ³	Transfer Method
20 liters	1.82 ml	Gravimetric Method

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5 gallons	0.082 in ³	Gravimetric Method
1 gallon	0.045 in ³	Gravimetric Method
1 quart	0.28 ml	Gravimetric Method
1 gill	0.039 ml	Gravimetric Method

1. Represents an expanded uncertainty using a coverage factor, k=2.

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